

ABSTRACT

A steel cord adapted for the reinforcement of elastomers includes: a core steel filament with a diameter d_c and coated with a polymer, six intermediate steel filaments with a diameter d_i smaller than or equal to d_c , the intermediate steel filaments being twisted around the core steel filament, ten to eleven outer steel filaments with a diameter d_o smaller than or equal to d_i , wherein these outer steel filaments are twisted around the intermediate steel filaments, and the outer steel filaments are preformed in order to allow rubber penetration inside the cord. The core steel filament, the intermediate steel filaments, and the outer steel filaments all have a tensile strength of at least 2600 MPa. The cord has an outer diameter D according to the following formula: $D \leq d_c + 2 \times d_i + 2 \times d_o + 0.1 \text{ mm}$, wherein all diameters are expressed in millimeters (mm).